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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/603,863

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Bong-Hwoan Choi

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EXAMINER

LAMB, CHRISTOPHER RAY

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/603,863	Applicant(s) CHOI, BONG-HWOAN	
	Examiner Christopher R. Lamb	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 5,696,744).

Regarding claim 6:

Okamoto discloses:

An apparatus detecting an optical disc, comprising:

a weight detection unit detecting a weight of the optical disc inserted in a disc drive (column 1, lines 50-55: Okamoto does not use the term “weight detection” but the weight of the disc determines the activation time disclosed there, and therefore this method detects the weight of the disc);

a comparison unit comparing an amount of data recorded on the optical disc from the lead-in area of the optical disc with a reference value (column 1, lines 45-50); and

a disc detection unit detecting a size of an optical disc according to the weight detected via the weight detection unit, determining the size of the optical disc by detecting the amount of data recorded on the optical disc from a lead-in area of the optical disc when the disc drive is driven (column 1, lines 55-60).

Okamoto does not disclose (in this embodiment):

“if determined as a result of the comparison via the comparison unit that the amount of data recorded on the optical disc is below the reference value, moving a pickup to a periphery area and measuring a focus error, and if the measured focus error is below a constant value, detecting the optical disc as a fashion disc type having diameters of 8 cm.”

Note that Okamoto discloses that the method fails when a short program is recorded on the disc (column 1, lines 65-67).

Okamoto discloses another method:

moving a pickup to a periphery area and measuring a focus error, and if the measured focus error is below a constant value, detecting the optical disc as a fashion disc type having diameters of 8 cm (column 3, lines 55-65; column 5, lines 25-60).

It would have been obvious to one of ordinary skill in the art to include in Okamoto wherein in the disc detection unit if determined as a result of the comparison via the comparison unit that the amount of data recorded on the optical disc is below the reference value, moving a pickup to a periphery area and measuring a focus error, and if the measured focus error is below a constant value, detecting the optical disc as a fashion disc type having diameters of 8 cm.

The rationale is as follows:

The claim is merely the combination of known methods taught by Okamoto: the weight detection and comparison method taught by Okamoto as prior art, and the focus error method in the main disclosure of Okamoto. As the methods were individually

known, one of ordinary skill could have combined them together with predictable results. The motivation would have been to introduce redundant checks, improving accuracy.

As to only performing the focus error "if determined as a result of the comparison via the comparison unit that the amount of data recorded on the optical disc is below the reference value," Okamoto disclosed that the amount of data check fails when a short program is recorded on a big disc (column 1, lines 65-67). Therefore it especially makes sense to add this additional focus error check in the circumstances that would lead to that failure: that is, when the amount of data recorded is short, or below a reference value.

Regarding claim 7:

Okamoto discloses wherein the detection unit includes:

a first disc detection unit that detects the size of the disc according to the weight detected via the weight detection unit (necessary to implement the method of column 1, lines 50-55);

a second disc detection unit that determines the size of the optical disc by detecting the amount of data recorded on the optical disc from the lead-in area of the optical disc when the disc drive is driven (necessary to implement the method of column 1, lines 45-50); and

a third disc detection unit that moves the pickup to the periphery area and measures the focus error, if it is determined as the result of the comparison via the comparison unit that the amount of data recorded on the optical disc is above the reference value, and detects the optical disc as the fashion disc type, if the measured

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focus focus error is below the constant value (column 3, lines 55-65; column 5, lines 25-60).

Regarding claim 8:

Okamoto discloses:

wherein the first disc detection unit detects the optical disc as either a standard disc having a diameter of 12 cm or a disc having a diameter of 8 cm according to the weight of the optical disc (column 1, lines 50-55; column 1, lines 10-20).

Regarding claim 9:

Okamoto discloses:

the second disc detection unit detects the optical disc as any one disc among a standard disc having a diameter of 12 cm on which data is fully recorded, a standard disc having a diameter of 12 cm on which data is partially recorded, and a disc having a diameter of 8 cm according to the amount of data recorded on the optical disc (column 1, lines 45-50: the total recording time is enough to tell whether the disc is fully recorded or partially recorded).

Regarding claim 10:

Okamoto discloses:

the third disc detection unit detects the optical disc as a fashion disc if the measured focus error is below the constant value (column 3, lines 55-65; column 5, lines 25-60) and as a standard disc having a diameter of 12 cm on which data is partially recorded if the measured focus error is above the constant value (column 3,

lines 55-65; column 5, lines 25-60; it knows if it is partially recorded since it earlier performed the step of reading the total recording time).

Response to Arguments

3. Applicant's arguments filed March 6th, 2008 have been fully considered but they are not persuasive.

Applicant acknowledges in their arguments that Okamoto teaches the individual detection methods claimed. Applicant argues, however, that "although some of the techniques may have been known, their combination to produce a more accurate disc detecting apparatus was not known."

As noted in the rejection above, it is true that Okamoto does not disclose combining the detection techniques. However, using multiple techniques simultaneously to add redundancy and decrease errors is well known in every sort of engineering. Since Applicant does not disclose any unexpected results from the combination, one of ordinary skill could certainly have used more than one of the techniques disclosed by Okamoto with predictable results. Therefore, the combination would have been obvious.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (571) 272-5264. The examiner can normally be reached on 9:00 AM to 5:30 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art
Unit 2627

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